

**SPECIFICATION**  
**OIL IMMERSED TRANSFORMER**  
**1600 KVA. 3 Ph. 50 Hz**  
**22000 - 400 / 230 V.**

**TCT** THAI CENTER TRANSFORMER CO.,LTD  
SPECIFICATION THREE PHASE TRANSFORMER

Address : 67 / 1 Moo.7 T. Bangkam A. Maung Nakhonpathom 73000

Tel. 081 - 8054856 , 034 - 219036 Fax 034 - 984092 <http://www.thaicentertransformer.com> e - mail : thaicenter671@hotmail.com

**Transformer Specification**

**Quote. Ref :**

**Customer :**

**Project :**

|                                     |                       |                                         |                         |
|-------------------------------------|-----------------------|-----------------------------------------|-------------------------|
| Rated power                         | .....KVA              | 1600                                    |                         |
| Type of transformer                 | -                     | <b>Oil immersed (CONSERVATOR TANK )</b> |                         |
| Standard                            | -                     | IEC 76                                  |                         |
| Cooling System                      | -                     | ONAN                                    |                         |
| No. Of phase                        | -                     | 3                                       |                         |
| Frequency                           | .....Hz               | 50                                      |                         |
| Rate of voltage : Primary           | .....V.               | <b>22000</b>                            |                         |
| : Secondary                         | .....V.               | <b>400/230</b>                          |                         |
| Vector group                        | -                     | Dyn 11                                  |                         |
| Tapping Type                        | -                     | <b>Off Circuit Tap Changer</b>          |                         |
| No. of steps                        | -                     | 5                                       |                         |
| Percentage of tapping               | -                     | <b>+ 2 x 2.5 %</b>                      |                         |
| Impedance voltage at 75 C           | .....%                | 6                                       |                         |
| NO - Load current                   | .....%                | 1.49                                    |                         |
| Ambient temperature                 | .....C                | 40                                      |                         |
| Average Temperature rise of winding | .....C                | 65                                      |                         |
| Average Temperature rise of top oil | .....C                | 60                                      |                         |
| Noise level not more than           | .....dB               | 56                                      |                         |
| No - Load loss                      | .....Watt             | <b>1880</b>                             |                         |
| Load loss at 75 C                   | .....Watt             | <b>18600</b>                            |                         |
| Efficiency at P.F. = 1              | : 25 % of rate power  | .....%                                  | 98.94                   |
|                                     | : 50 % of rate power  | .....%                                  | 98.08                   |
|                                     | : 75 % of rate power  | .....%                                  | 98.79                   |
|                                     | : 100 % of rate power | .....%                                  | 98.56                   |
| Voltage regulation                  | : at P.F. = 0.8       | .....%                                  | 3.22                    |
|                                     | : at P.F. = 0.9       | .....%                                  | 2.71                    |
|                                     | : at P.F. = 1.        | .....%                                  | 1.17                    |
| Impulse Withstand Voltage           | : Primary winding     | .....KV.                                | 125                     |
|                                     | : Secondary winding   | .....KV.                                | -                       |
| Power Frequency                     | : Primary winding     | .....KV.                                | 50                      |
|                                     | : Secondary winding   | .....KV.                                | 3                       |
| Terminal arrangement                | H.V. Side             |                                         | Cable                   |
|                                     | L.V. Side             |                                         | Cable                   |
| Installation on                     |                       |                                         | Pole mounted / Platform |

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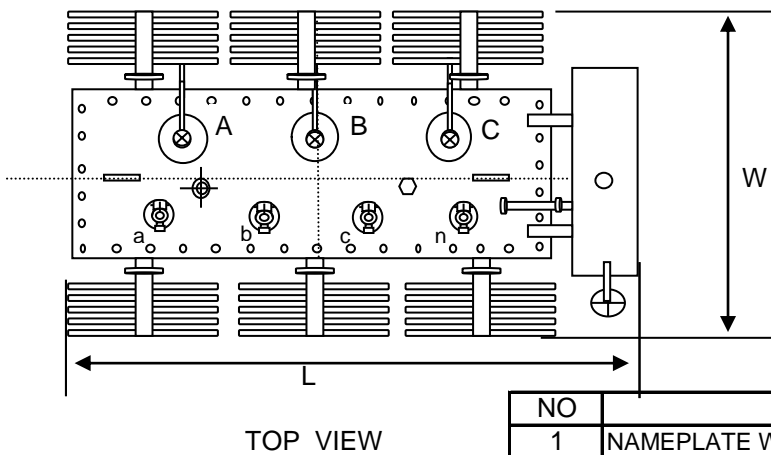
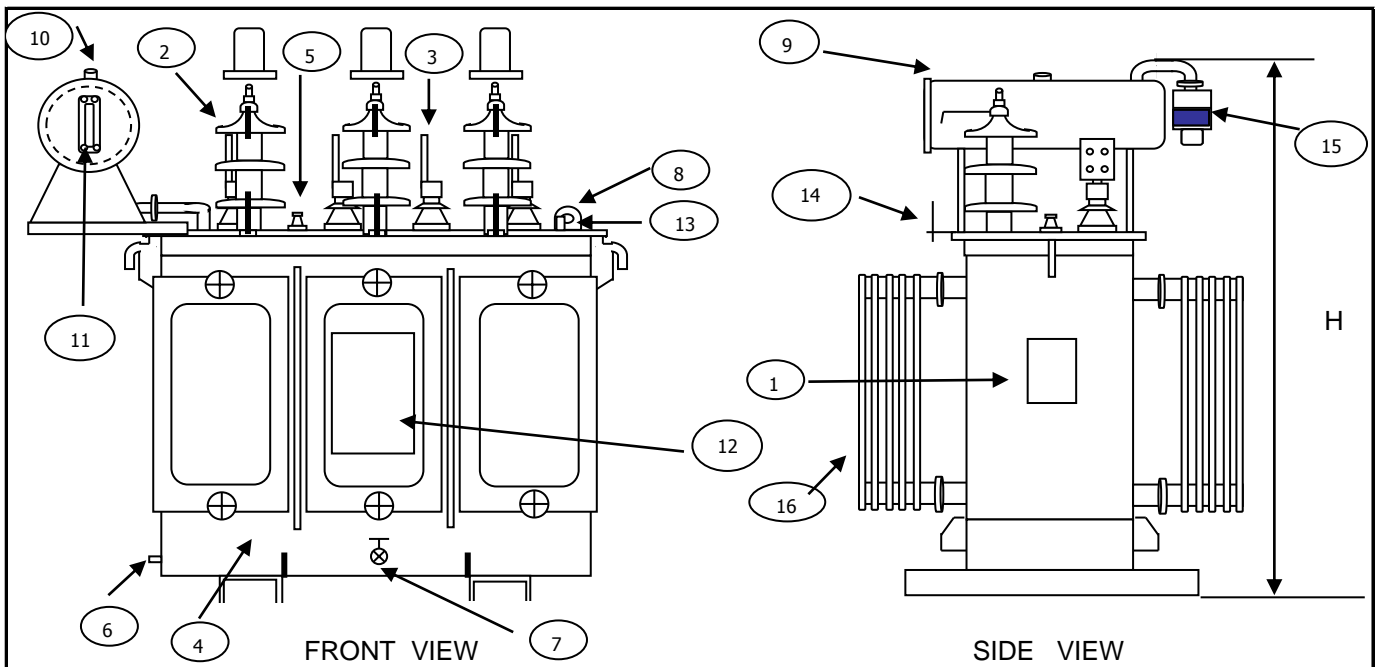
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**Quote. Ref :**

**Customer :**

**Project :**

|                                          |                                         |
|------------------------------------------|-----------------------------------------|
| Rated power                              | <b>1600</b>                             |
| Type of transformer                      | <b>Oil immersed ( CONSERVATOR TANK)</b> |
| <b>Accessories</b>                       |                                         |
| H.V. Bushing with terminal connector     | Included                                |
| L.V. Bushing with terminal connector     | Included                                |
| Grounding pad or earth terminal          | Included                                |
| upper fillter press sampling valve       | Included                                |
| Oil drain, filter press sampling valve   | Included                                |
| Name plate                               | Included                                |
| Arcing Horn                              | Included                                |
| Skid Base                                | Included                                |
| Mechanical pressure relief device        | Included ( without contact )            |
| Oil level indicator                      | Included ( with contact )               |
|                                          | Included ( with contact )               |
|                                          | Included ( with contact )               |
| <b>Testing</b>                           |                                         |
| <b>- Routine test</b>                    |                                         |
| Ratio test at each position of tap       | Included                                |
| Polarity and phase relation test         | Included                                |
| Resistance measurement                   | Included                                |
| No - Load loss and exciting current test | Included                                |
| Impedance and load loss test             | Included                                |
| Applied potential test                   | Included                                |
| Induced potential test                   | Included                                |
| Insulation resistance test               | Included                                |
| Oil test                                 | Included                                |
| <b>- Specia test</b>                     |                                         |
| Impulse withstand test                   | Included ( Thaicenter lab )             |
| Temperature rise test                    | Included ( Thaicenter lab )             |



| NO | DESCRIPTION                        | QTY. |
|----|------------------------------------|------|
| 1  | NAMEPLATE WITH CONNECTION DIAGRAM  | 1    |
| 2  | HV. BUSHING W / TERMINAL CONNECTOR | 3    |
| 3  | LV. BUSHING W / TERMINAL CONNECTOR | 4    |
| 4  | TANK                               | 1    |
| 5  | TAP CHANGE                         | 1    |
| 6  | EARTH TERMINAL                     | 1    |
| 7  | OIL DRAIN VALAE                    | 1    |
| 8  | LIFTING EYES ON THE COVER          | 2    |
| 9  | CONSERVATOR TANK                   | 1    |
| 10 | OIL FILLING CAP                    | 1    |
| 11 | OIL LEVEL GAUGE                    | 1    |
| 12 | LOGO                               | 1    |
| 13 | THERMOMETER POCKET                 | 1    |
| 14 | ARCING HORN                        | 3    |
| 15 | DEHYDRATING BREATHER SILICAGEL     | 1    |
| 16 | CORRUGTED FIN                      | 1    |

| THAI CENTER TRANSFORMER CO.,LTD |                  |         |         |                         |                        |
|---------------------------------|------------------|---------|---------|-------------------------|------------------------|
| Dimension in millimetres        |                  |         |         | Total wt.               | Oil                    |
|                                 | H                | L       | W       | ( Kgs.)                 | ( Litres )             |
|                                 | 2280 mm          | 2500 mm | 1600 mm | 4600                    | 1300                   |
| <b>DESIGN No.</b>               | 001600TCT0052003 |         |         | <b>S/O No.</b>          | A52001                 |
| <b>NAME</b>                     |                  |         |         | <b>TITLE :</b>          | <b>OUTLINE DRAWING</b> |
| <b>DRN.BY</b>                   |                  |         |         | 1600 kVA. 3 Ph. Dyn11   |                        |
| <b>CHK.BY</b>                   |                  |         |         | 22000 - 400 / 230       |                        |
| <b>APP. BY</b>                  |                  |         |         | TYPE : CONSERVATOR TANK |                        |

**PRELIMINARY DRAWING**

This drawing is for estimation only showing approximate dimensions and should not be used for actual purposes  
In case of order a definite drawing will be produced for formal approval